CLAIM AMENDMENTS

1. (Currently Amended) A method of adjusting a knock detection system for a piston engine having at least first and second cylinders, wherein the knock detection system comprises at least first and second sensors for said first and second cylinders respectively and a ~~measurement means~~ measuring means connected to the sensors, whereby the ~~measurement means~~ measuring means provides first and second signals indicating intensity of knocking in the first and second cylinders respectively, and wherein the ~~measurement means~~ measuring means has at least first and second adjustment variables for adjusting the ranges of said first and second signals respectively, said method comprising:

running the engine at a selected load less than full load,

adjusting the first adjustment variable to bring the range of the first signal within preset limits and storing a corresponding value of the first adjustment variable, and

adjusting the second adjustment variable to bring the range of the second signal within said preset limits and storing a corresponding value of the second adjustment variable.

2. (Currently Amended) A method according to claim 1, wherein the knock detection system comprises at least one sensor for each cylinder of the engine and the ~~measurement means~~ measuring means is connected to each of the sensors and provides a plurality of signals indicating intensity of knocking in the cylinders respectively, and the ~~measurement means~~ measuring means has a plurality of adjustment variables for adjusting the ranges of the plurality of signals respectively, and the method comprises adjusting the plurality of adjustment variables consecutively to bring the range of each signal within said preset limits and storing a corresponding value of each adjustment variable.

3. (Original) A method according to claim 1, comprising computing an average of the magnitude of the first signal, comparing the average valuc to a set point value, and, in the event that the average value is different from the set point value, adjusting the first adjustment variable to reduce the difference between the average value and the set point value.

4. (Original) A method according to claim 3, wherein the first adjustment variable is a voltage gain and the method comprises adjusting said voltage gain so that the average voltage is equal to the set point voltage.

5. (Currently Amended) A method according to claim 1, wherein the ~~measurement means~~ measuring means comprises a plurality of measurement circuits providing said plurality of signals respectively, the adjustment variables are gain values of the measurement circuits respectively and the method comprises storing the gain value for each measurement circuit.

6. (Original) A method according to claim 1, comprising adjusting the knock detection system on start up of the engine.

7. (Original) A method according to claim 6, comprising adjusting the knock detection system in connection with every start up of the engine.

8. (Currently Amended) A method of operating a piston engine having at least first and second cylinders and a knock detection system that comprises at least first and second sensors for said first and second cylinders respectively and a ~~measurement means~~ measuring means connected to the sensors, whereby the ~~measurement means~~ measuring means provides first and second signals indicating intensity of knocking in the first and second cylinders respectively, and wherein the ~~measurement means~~ measuring means has at least first and second adjustment variables for adjusting the ranges of said first and second signals respectively, said method comprising:

adjusting the knock detection system by running the engine at a selected load less than full load, adjusting the first adjustment variable to bring the range of the first signal within preset limits and storing a corresponding value of the first adjustment variable, and adjusting the second adjustment variable to bring the range of the second signal within said preset limits and storing a corresponding value of the second adjustment variable, and

subsequently running the engine at full load and operating the knock detection system with the first and second adjustment variables set to the stored values respectively.

9. (Currently Amended) A method according to claim 8, wherein the knock detection system comprises at least one sensor for each cylinder of the engine and the ~~measurement means~~ measuring means is connected to each of the sensors and provides a plurality of signals indicating intensity of knocking in the cylinders respectively, and the ~~measurement means~~ measuring means has a plurality of adjustment variables for adjusting the ranges of the plurality of signals respectively, and the method comprises adjusting the plurality of adjustment variables consecutively to bring the range of each signal within said preset limits and storing a corresponding value of each adjustment variable.

10. (Original) A method according to claim 8, comprising computing an average of the magnitude of the first signal, comparing the average value to a set point value, and, in the event that the average value is different from the set point value, adjusting the first adjustment variable to reduce the difference between the average value and the set point value.

11. (Original) A method according to claim 10, wherein the first adjustment variable is a voltage gain and the method comprises adjusting said voltage gain so that the average voltage is equal to the set point voltage.

12. (Currently Amended) A method according to claim 8, wherein the ~~measurement means~~ measuring means comprises a plurality of measurement circuits providing said plurality of signals respectively, the adjustment variables are gain values of the measurement circuits respectively and the method comprises storing the gain value for each measurement circuit.

13. (Original) A method according to claim 8, comprising adjusting the knock detection system on start up of the engine.

14. (Original) A method according to claim 13, comprising adjusting the knock detection system in connection with every start up of the engine.